Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Synthetic Minor, Construction / Operating
Permit: F-08-020 R1
Equitable Gathering - Jenkins Compressor Station
Jenkins, KY 41537
March 12, 2009
Andrew True, Reviewer

SOURCE ID:	21-133-00109
AGENCY INTEREST:	100520
ACTIVITY:	APE20090001

ADMINISTRATIVE PERMIT AMENDMENT - F-08-020 R1:

Equitable Gathering, LLC- Jenkins Compressor Station has changed its mailing address.

	Previous Mailing Address	New Mailing Address
Address:	1480 Industrial Park Road Jenkins, KY 41537	P.O. Box 158 Pikeville, KY 41502

SOURCE DESCRIPTION:

Equitable Gathering, LLC submitted an air permit application to construct and operate a new natural gas compressor station in Letcher County near Jenkins, Kentucky (Jenkins Station). The application was received by the Division for Air Quality on May 8, 2008. The station is used to compress natural gas as it is being transported via pipeline. The Jenkins compressor station consist of two (2) electric compressors, a glycol dehydration unit with associated natural gas fired reboiler, and six (6) small storage tanks. The emissions from the dehydrator unit are vented to a flare for control of volatile organic compounds (VOC) and hazardous air pollutants (HAP).

Natural gas enters the station via a distribution pipeline system and is compressed using two (2) electric-powered compressors (Units #1 and #2). The compressed natural gas stream is then processed through the triethylene glycol (TEG) dehydration unit. The dehydration unit filters the natural gas and separates excess water using a distillation process in which heat is provided to the dehydrator column by a natural gas-fired reboiler, which is rated at 1.0 million British thermal units per hour (mmBtu/hr). The natural gas stream from the dehydrator is reintroduced into the pipeline to be transported further along the distribution system. Liquid fractions removed from the natural gas via dehydration are stored in small storage tanks at the station. The dehydrator exhaust is vented to a flare for control of volatile organic compounds (VOC) and hazardous air pollutants (HAP).

COMMENTS:

CONTROLS AND EFFICIENCIES

A flare is used to limit VOC and HAP emissions from the glycol dehydrator to less than major source levels (below 100 tpy and 10/25 tpy for VOC and HAP/HAPs respectively). The flare has a removal/control efficiency of 95%.

APPLICABLE REGULATIONS

40 CFR 63 Subpart HH, *Oil and Natural Gas Production Facilities*, applies to the Jenkins Station. Pursuant to 40 CFR 63.760 (b) and 63.671, NESHAP Subpart HH applies to facilities that:

- Are major or area sources for HAPs; and
- Process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer; or
- Process, upgrade, or store hydrocarbon liquids prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user.

The Jenkins Station will be an area source of HAP emissions, which processes natural gas in a glycol dehydrator prior to the point of custody transfer. The benzene emissions from the glycol dehydrator vent will be less than 0.90 megagrams per year (0.99 tpy). Pursuant to 40 CFR 63.764(e)(1)(ii), the emission, monitoring, recordkeeping, notification, and reporting requirements of 40 CFR 63 Subpart HH will not apply to the Jenkins Station, with the exception of the requirement to keep records of the exemption determination per 40 CFR 64.774(d)(1).

401 KAR 63:015, *Flares*, applies to the flare at the Jenkins Station. Pursuant to 401 KAR 63:015 Section 3, the opacity of visible emissions from the flare stack shall not exceed 20 % for more than 3 minutes in any one day.

NON-APPLICABLE REGULATIONS

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*, does not apply to the Jenkins facility because the emissions are subject elsewhere to the provisions of the administrative regulations of the Division for Air Quality and subject to 40 CFR 63 Subpart HH.

Prevention of Significant Deterioration (PSD) – Natural gas compressor stations are not on the list of 28 PSD source categories defined in 40 CR 52.21(b) for which the major source threshold is 100 tpy. Thus, the major source threshold for regulated pollutants under the PSD program for this station is 250 tpy. The uncontrolled potential emissions of each regulated pollutant are less than 250 tpy, with the exception of VOC. However, Equitable Gathering has requested a federally enforceable limit on VOC emissions to keep the facility below major source levels. The station will be classified as a minor source under the PSD program and this permit action is not subject to PSD requirements.

40 CFR 63.1270, Subpart HHH, *National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities* - Pursuant to 40 CFR 63.1270, NESHAP Subpart HHH applies to natural gas transmission and storage facilities that are major sources of HAP. The Jenkins Station will be a minor source of HAP, therefore, the requirements of this subpart will not apply to the station.

40 CFR 63 Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants From Stationary Reciprocating Internal Combustion Engines:* The compressors at the Jenkins Station will be electric powered not reciprocating combustion and therefore 40 CFR 63 Subpart ZZZZ will not apply to the Jenkins Station facility.

40 CFR 60 Subparts D, DA, DB, and DC, *New Source Performance Standards (NSPS) for Steam Generating Units*. 40 CFR 60 Subparts D, DA, DB, and DC applies to steam generating units of various sizes, all greater than 10 mm Btu/hr. The Jenkins Station will not have any steam generating units greater than 10 mmBtu/hr. Therefore the requirements of these subparts will not apply.

40 CFR 60 Subparts K, KA, and KB, *NSPS for Storage Vessels For Petroleum Liquids/Volatile Organic Liquids*. 40 CFR 60 Subpart K applies to storage tanks constructed, reconstructed, or modified prior to 1978. 40 CFR Subpart Ka applies to storage tanks constructed, reconstructed, or modified prior to 1984. The storage vessels at the Jenkins Station will be constructed after 1978 and 1984, and therefore these subparts are not applicable. 40 CFR 60 Subpart Kb applies to volatile organic liquid (VOL) storage tanks constructed, reconstructed, or modified after July 23, 1984 with a capacity greater than 75 cubic meters (m^3). None of the storage tanks at the Jenkins Station will have a capacity greater than 75 m^3. Therefore, subpart Kb will not apply to the storage tanks.

40 CFR Subpart KKK, *NSPS For Equipment Leaks of VOC From Onshore Natural Gas Processing Plants.* Pursuant to 40 CRF 60.630, Subpart KKK applies to onshore natural gas processing plants that commenced construction, reconstruction, or modification after January 20, 1984. However, the Jenkins Station does not meet the definition of a natural gas processing plant as defined in 40 CFR 60.631. The extraction of natural gas liquids from field gas or fractionation of natural gas liquids to products will not occur at this station and the requirements of NSPS Subpart KKK will not apply.

40 CFR 60 Subpart LLL, *NSPS For Onshore Natural Gas Processing: SO_2 Emissions*. Pursuant to 40 CFR 60.640, NSPS Subpart LLL applies to each sweetening unit and each sweetening unit followed by a sulfur recovery unit at onshore natural gas processing plants. The Jenkins Station will not contain a natural gas sweetening device as defined in 40 CFR 60.641 and the requirements of Subpart LLL will not apply.

40 CFR 60 Subpart IIII – *NSPS For Stationary Compression Ignition Internal Combustion Engines.* The compressors at the Jenkins Station will be electric powered, and therefore the requirements of 40 CFR 60 Subpart IIII will not apply.

40 CFR 60 Subpart JJJJ- *NSPS For Stationary Spark Ignition Internal Combustion Engines.* The compressors at the Jenkins Station will be electric powered, and therefore the requirements of 40 CFR 60 Subpart JJJJ will not apply.

401 KAR 59:015, *New Indirect Heat Exchangers* applies to indirect heat exchangers having a heat input capacity of more than one (1) million British thermal units per hour (mmBtu/hr). The compressors at the Jenkins Station do not meet the definition of an indirect heat exchanger and the reboiler has a heat input capacity of 1.0 mmBtu/hr. Therefore, 401 KAR 59:015 does not apply to any emission units at the Jenkins Station facility.

401 KAR 59:050 *New Storage Vessels for Petroleum Liquids* is not applicable to the Jenkins Station. The facility is a minor source for VOC and located in Letcher County, which is an attainment area for all criteria pollutants.

EMISSION AND OPERATING CAPS DESCRIPTION:

The Jenkins Station could have uncontrolled emissions greater than 100 tpy of volatile organic compounds (VOC). The station could also have uncontrolled emissions greater than 10 tons per year (tpy) of an individual hazardous air pollutant (HAP) and 25 tpy of total HAPs. The source-wide PTE of all pollutants will be less than major source thresholds without any federally enforceable emission limitations, except for VOC and HAP emissions. The flare will limit VOC and HAP emissions from the glycol dehydrator to less than major source levels (below 100 tpy and 10/25 tpy for VOC and HAP/HAPs respectively); therefore, the facility will be classified as a minor source for these pollutants. Due to the restriction of potential below major source thresholds, the federally enforceable permitting requirements for non-major sources will apply to the Jenkins Station.

CREDIBLE EVIDENCE:

This permit contains provisions, which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.